



DATE : April 18, 1985
TO : Management Review Committee
FROM : Tim Croll *Mr Croll*
SUBJECT : PCB Management

The development of a judicious and far-seeing utility-wide program for PCB management continues to be a critical priority for Seattle City Light. Work so far has succeeded in distinguishing most of the "pieces of the puzzle". Now we need to combine the pieces into a complete and uniform program. This memo summarizes recent progress, and offers our suggestions as to how the utility should proceed.

- I. Accomplishments to date in developing a PCB management program for Seattle City Light.
 1. Research by EAD staff identified shortcomings in Seattle City Light's overall handling of materials, equipment and property that are potentially contaminated with PCB's. (They were outlined in our 12/28/84 memo to Macdonald (copy attached) and are expanded in the attached matrix.)
 2. 9/84 - 2/85 an Interdivisional Task Group met to discuss PCB practices. This group completed its efforts with recommendations concerning testing and storage of equipment sent to the warehouse for disposal, and spill prevention at the South Service Center. (2/27/85 memos: Rockey to Macdonald; Macdonald to Cruz.)
 3. Those efforts have led to greater knowledge throughout the divisions of the issues and concerns relevant to overall PCB management.

The "bare bones" of these issues can be listed as follows:

INVENTORY

(Where could PCB's be?)

SAMPLING

(How do we find out how much PCB is where?)

TREATMENT/DISPOSAL

(How do we get rid of it?)

ACCIDENTS

(How do we deal with them?)

RECORD KEEPING

(How do we keep track of all this on paper?)

WORKER PROTECTION

4. During recent months some of the specific details in this structure have already been filled in. For example:
 - o the underground Network has a multi-year program for testing all their transformers, labelling them appropriately, checking regularly for leaks, and replacing contaminated oil;
 - o Distribution has developed interim oil spill response procedures for construction and maintenance personnel;
 - o the Repair Shop has developed a procedure for testing oil in transformers before they are worked on;
 - o EAD has developed a program for testing soils at the unit substations as they are taken out of service.

II. Further development needs to focus on uniting the above elements, as well as elements still unaddressed, into a comprehensive and consistent program that is implemented throughout the utility.

1. Policy:

During the past year of dealing with site cleanups, other major PCB contamination problems and fines, it has become clear in our opinion that prudent management may go well beyond mere compliance with the current law. With WDOE's adoption of new rules on dangerous wastes, PCB's will now be regulated by the state down to very low levels. Similarly, PSAPCA is planning to restrict the burning of oil contaminated with PCB's down to 5 ppm. Thus, prudent management and compliance are becoming more synonymous. We still think, however, that Seattle City Light should more explicitly recognize a philosophy of prudent management with respect to protection of environmental and human well-being, as well as to protection from future Superfund liability. We would like the Management Review Committee to approve in principle this expansion of our current policy. EAD staff are willing to draft the specific language.

2. Procedures:

We see the following tasks remaining:

- a. Review each category in the matrix (inventory, sampling, etc.) to complete the assessment of procedures and practices (formal or informal) that already exist. Consolidate all of this information in one place.

- b. Review these existing activities for compliance, prudence, and interdivisional consistency, and revise as necessary.
- c. Identify gaps/weaknesses in the structure, prioritize them, and identify a process and a time-frame for filling them.
- d. Examine the possibilities for automated, centralized record-keeping. (We see this as very important - particularly with respect to compliance reporting.)
- e. Identify which division will take the lead in maintaining the management program once it is developed. (We think that an EUS division would be most appropriate.)

The fulfillment of these tasks requires the participation of personnel with some time, broad knowledge of the utility's needs, and a certain level of responsibility. We therefore recommend the formation of a mid-management level PCB Program Group to address the tasks and make further recommendations to the Management Review Committee.

EAD is willing to facilitate the work of this group by organizing meetings, developing agendas, collecting and sharing information, etc. We anticipate that the activities outlined above can be accomplished by 8/15/85, in accordance with Randy Hardy's PCB Contamination Implementation Plan (2/27/85, attached).

In summary, we request the Management Review committee:

1. to approve the philosophy of "prudent management" for incorporation into our PCB policy;
2. to charter a PCB Program Group to address the continued development of Seattle City Light's PCB Management Program.

These efforts will impact all the EUS divisions, as well as Environmental Affairs. We will be glad to discuss this at the Management Review Committee meeting.

TCC:mbm

cc: Management Review Committee w/attachment
Hardy
Fletcher, K.
Macdonald
Saven
Rockey
Mandapat
Sickler
Hunich
Croll
Garman

cc: Cruz McIntogh
DeVries Luboff
Vargas Dyckman
Fletcher, J. Kakida
Cuplin EAD
Jerochim File
Rauch



Date: December 28, 1984

To: Mac Macdonald
Lynn Best for

From: Tim Croll

Subject: PCB Management at Seattle City Light

Members of my staff recently attended a workshop sponsored by Puget Power on PCB management by companies like City Light. This session and other recent events highlighted for us some shortcomings in City Light's management of PCBs. In calling to your attention the items below, we suggest that the key missing links are cross-divisional coordination and the fact that our system addressed PCB fluid manufactured to be over 500 ppm but omitted potentially contaminated mineral oil, although EPA regulations cover both. These can be important factors in responding to enforcement actions by agencies such as the EPA, as well as in better management and control of the controversial substance, and are therefore of considerable concern to us.

Models for PCB management systems are available, and the rationale for a systematic approach is based on the EPA's TSCA regulations 40 CFR 761, which banned the manufacture of PCBs after 1979 and severely limit use of the substance. Only "totally enclosed uses," as defined in the regulation, are permitted, and no exposure in the environment is allowed from these uses. As a result, many special provisions for servicing equipment, storage, and disposal are necessary. The eventual phasing out of all PCB in the environment is contemplated by the regulation.

City Light has responded to PCB regulations and agency enforcement actions over the years, and is doing so now, but has not done so in a fully coordinated fashion. No one office or division has responsibility or records adequate enough to amount to a management scheme. This means PCB contamination can be spread in our system, and we have not taken all reasonable steps to ensure that PCB we dispose of is handled in ways to minimize our liability. Examples follow:

1. We don't have purchasing criteria for services, including disposal of equipment involving intentional or unintentional

PCB handling. Indeed, as we read other utilities' criteria for evaluating prospective bidders, we are struck by our own failure to meet some of the qualifications.

2. We don't have complete information on suppliers, treatment companies, or disposers in the hands of all persons in the utility involved in purchases or sales which intentionally or unintentionally involve PCB. At a minimum, these people are in Purchasing, Materials Management, Operations, Engineering, and EAD.
3. We don't have a complete, up-to-date inventory of PCB and PCB contamination in our system. Equipment manufactured as PCB was inventoried. This inventory did not capture any mineral oil equipment which may be contaminated at over 500 ppm PCB which must legally be considered as PCB with all attendant handling and disposal procedures.
4. We have relied on visual inspection of nameplates to identify PCB transformers (those with over 500 ppm in the fluid), even though our experience has revealed that we have so-called mineral oil transformers with fluid contaminated with over 500 ppm PCB. Recently, we have discovered several transformers on customers' property contaminated to levels above 500 ppm.
5. We have no systemwide program to test all equipment in service to determine PCB. This raises several potential problems: that undetected contamination may be spread during servicing, that we are unable to respond to the Fire Department's request for locations of PCB, that our personnel don't know when to use appropriate safety protections.
6. We don't have centralized or uniform records or record keeping. Various divisions have partial record keeping responsibilities. Access to other divisions' partial records is not always readily available, even though the utility is required by law to make a complete annual report on all PCB handled, including weights and concentrations. For example, Materials Management, responsible for our annual reports, was not informed at the time of the reclassifying of several hundred gallons of PCB oil in in-service transformers, arranged by Engineering.

7. We don't have consistent procedures among divisions--formal or informal--for PCB handling. Thus, for example, a leaking transformer may not be treated by the distribution or repair crew as contaminated, as it must be treated by salvage; disposal of PCB-contaminated rags and waste in the field may not be the same as in the shops.
8. We don't have consistent requirements among divisions for use of protective clothing and equipment.
9. We don't have PCB training for all appropriate personnel, or consistent practices for:
 - o servicing equipment;
 - o cleaning or disposing of oil equipment, or contaminated items, such as shovels, gloves, or oil;
 - o testing (batch, tank, or individual unit; chlor-n-oil, gas chromatograph, or other); and
 - o record keeping (EPA-required marking, labeling, annual reports; DOT's manifests).

It does not appear that there is consistency among supervisors in dealing with these matters, either. It seems contrary to the utilities' interest that personnel are required to do work without being fully trained to do it safely and correctly.

10. We don't have spill prevention control and countermeasure plans for areas where PCB or PCB-contaminated oil may be stored. The PCB regulations require these plans be prepared according to the Clean Water Act, and require that these plans address PCB.
11. We don't have adequate storage and containment at all sites where PCB or PCB-contaminated oil may be present. The South Service Center storage facility problem has begun to be addressed, but containment and potential pollution to the Duwamish waterway and other areas remain a concern.
12. We know little, if anything, about our equipment that may contain PCB other than transformers and capacitors. These include light ballasts (streetlight and fluorescent light),

circuit breakers, switches, hydraulic, and other machinery where heat is produced. Even the 1981 inventory for the Edison Electric Institute made no attempt to identify these sources.

The Departmental Policy and Procedure for Handling of PCBs (DPP 500 P 604), is apparently not comprehensive enough. Significantly, its application depends upon personnel knowing the PCB concentration in oil and equipment they handle, while in fact, the concentration is unknown and no testing is done before handling. Thus, while EPA regulations state that all mineral oil must be assumed contaminated until tests show otherwise, handling for maintenance or repair does not automatically follow this legal assumption, nor is there a comprehensive plan to test all equipment to ascertain PCB concentrations so employees will know. The DPP does not mention use of personnel protective gear or gear, such as shoe coverings, to avoid spreading potential contamination in the environment. The DPP authorizes additional procedures for Operations Division (6.1.2), but not for Distribution or Materials Management Division (6.2.2), creating discrepancies among these divisions.

The PCB Emergency Operations Procedure (EOP) is not applied in all transformer or potential PCB handling. It could be enhanced, and made easily known through training and signs at our facilities, for example. Overall, it appears to us that the provisions of the DPP and EOP may not be known widely enough among personnel who should enforce or practice it, and that greater detail would assist all concerned.

For a utility of our size, and a public agency, it would be in our best interest to address the issues of PCB management in a systematic fashion, to end the fragmentation of responsibilities and discrepancies in our practices. Such an approach would help in work load and budgetary planning needed to assess testing of soils and equipment, surplus land, retrofilling or replacing equipment, and clean-up projects like Gerogetown, Lake Union Steam Plant, and some substations. From an enforcement standpoint, too, we would be in a stronger position and could answer more promptly and accurately the EPA subpoenas we have received in the past and will receive in the future.

We are preparing a matrix listing the above items in detail and indicating what has been or is being done to our knowledge. We will also list recommendations when we have appropriate ones to offer. The PCB management guides from EPA and SCS Consulting Engineers are among many references we have utilized, in addition to our own experience and numerous Seattle City Light memos from past years.

M. J. Macdonald
December 28, 1984
Page 5

We are convinced that we are facing an opportunity for responsible action at this time and are ready to assist others in the utility to establish sound, comprehensive PCB management at City Light. We recommend that the "division coordinators for PCB management" called for in the DPP, convene as a task force to establish a coordinated PCB-management system, including review of the DPP and drafting of more detailed procedures uniform for all divisions. The task force can be coordinated by EAD, as suggested by sections 6.5.2 and 6.5.4 of the DPP, EAD Responsibilities. Alternatively, coordination could be directed from your office. It seems to us that in any case, two elements are crucial: management-level involvement for policy making and interdivisional involvement for consistency and completeness. This memo could serve as an agenda for such a working group.

TC:sha

Croll
Dyckman
Benson
Axelrod
EAD
File

CTY0069214

SEA315628

PCB Management at City Light: Issues Matrix from Environmental Affairs Division
(Refer to memo of December 19, 1984.)

| <u>ISSUE</u> | <u>STATUS</u> | <u>RECOMMENDATIONS</u> |
|---|---|---|
| 1. Purchasing criteria. | Some in process. | Generally: <ul style="list-style-type: none"> o Develop with purchasing, Mat. Mgt., others. o Centralize records of transactions. o Encourage sale for reuse of noncontaminated equipment. o Bar landfilling of PCB-contaminated oil. o Evaluate decontamination methods, firms. |
| a. PCB-free oil, mineral oil equipment. | Oil now certified to be free of PCB upon purchase. | |
| b. Waste oil dealers (under 50 ppm). | 10//24/84 criteria memo from EAD to Purchasing at its request. Methodology for recycling more important than price. | (on PCB) Monitor expected new regs. from EPA, that may classify this oil as a hazardous material. Monitor state legislation that may restrict oil over 7 ppm PCB. |
| c. PCB disposal firms, acceptable disposal methods, environmental violations records. For contam. oil, pure PCB, capacitors, debris, equipment. | Ongoing research on firms, as time allows, by EAD. No systematic or utility list available in recent years. List developed for LUSP oil disposal. | Develop qualifications criteria. Refer, for example, to bid criteria from Kansas Municipal. |
| d. Retrofilling transformers to reclassify them as noncontaminated (so far, applied to network | Criteria requested by Purchasing to reflect EPA TSCA regs. on methods and later testing. Additional units recently found; contracting process | Write criteria - Distr. and/or Eng. consult EAD about firms, regs. |

ISSUE

STATUS

RECOMMENDATIONS

transformers found to be contaminated to 500 ppm or more).

being handled in Distr. and Eng.

- e. Sale of usable electrical equipment for rebuilding or reuse.

10/30/84 criteria memo from EAD to Eng.; recommended this alternative be actively pursued for noncontaminated equipment. EAD has offered to research firm's environmental records when notified. Also recommended contract stipulations for liability protection.

Market research needed. Prospective buyers need to be assessed. We could set PCB concentration threshold of 5 rather than 50 ppm to create "safety cushion" for ourselves for equipment sold this way. 5 ppm cutoff still captures approximately 80 percent of distrib. transformers we have in salvage.

2. Information on firms - contract performance for those we now deal with; keeping abreast of new developments, permits and citations from EPA and OSHA. Again, methodology more important than price because of legal liability and environmental impacts.

See l.c. above. Much data gathered informally. Research also done for LUSP RFP. No centralized file for all divisions seeking services of such firms, no formal mechanism for interdivisional communication regarding qualified or unqualified firms. Notion of qualification presupposes existence of criteria (see 1).

With purchasing and Mat. Mgt., all "buyer" divisions could compile data on firms and establish an accepted list for joint use. Agree on method to assess new firms or new developments affecting old firms (such as EPA or state permitting changes).

Basic criteria: Has proper permits, good record with enforcement agencies, employee training on safety and laws, allows us to inspect premises and observe processes, uses legally and environmentally sound handling and disposal methods.

✓. Inventory

- g. Nameplate inspection does not identify all equipment with over 500 ppm because

EPA has charged us with violating TSCA by not treating as PCB equipment they saw lacking in nameplate

Assess adequacy of reporting by affected divisions, knowledge of DPP. Assess adequacy of Annual Reports and

ISSUE

contamination to high levels occurs in mineral oil transformers. Testing at salvage and in network vaults has revealed contamination over 500 ppm and occasionally over 1,000 ppm in mineral oil units. Also, see 4, 5, and 6 below.

Other equipment besides transformers and capacitors not generally identified.

STATUS

information.

1981 Edison Elec. Inst. Survey completed. No ongoing inventory kept (done once in 1981 for national survey; no update to our knowledge).

Annual reports on PCB removed and PCB remaining in system prepared (required by EPA TSCA regs). Past reports appear cursory. Responsibility for compiling reports transferred to SSC warehouse supervisor in 1984. Other divisions had not received copies of reports in past, but will per 6/84 DPP. Other divisions were apparently unaware reports are required, but should forward records such as for retrofills not handled through salvage or PCB test kits not obtained through warehouse.

Some contamination will be revealed during EAD SEPA review of projects such as substation construction; some during maintenance of in-service equipment. Testing has revealed contamination in circuit breakers, potential transformers slated for removal in connection with construction planned at one substation.

RECOMMENDATIONS

correlation of data upon which they are based (not always reconciled in past reports). May be useful for cost-effectiveness analysis of removal/disposal schedules, methods, and Seattle City Light storage needs.

| <u>ISSUE</u> | <u>STATUS</u> | <u>RECOMMENDATIONS</u> |
|---|---|--|
| Maintenance records could be set up in a way which helps identify PCB contamination, feeds into system-wide record keeping, and triggers appropriate responses. | New record keeping weekly reports by Distr. for network transformers in service established 12/84 in connection with accelerated testing for PCB (see 5). | Useful information, good model, good interdivisional transmittal; may be applicable for other records. |
| b. EPA has proposed new rules regarding toxic smoke concerns from fires in or near transformer vaults. | Final EPA action expected this month. | Monitor; consider need to accelerate network transformer inventory even further. |
| c. Fire Department requests location of all our PCB and PCB articles. SCL wrote about pure PCB transformers and those contaminated to over 500 ppm, when found. We had not explained that we didn't know the location of all such equipment because we had no program to identify it. | Letters to EPA on several occasions. Latest letter prepared by EAD with Distr. Eng.'s review, discontinued statement that we had now taken care of all known PCB in our system. | Meet with Seattle Fire Department (SFD) to explain our situation; discuss their concerns. Assure information flow their acceptable to both SFD and SCL (Deputy Chief John Church, Hazardous Materials). |
| d. We can't assess the full effectiveness of SCL actions in reducing PCB in our system because of incomplete or unshared records and "holes" in our procedures such as transformer shop not testing oil before it is | Subject has been broached with Operations. Distr. requested network transformers be individually tested in shop to assist in recently stepped-up testing. | Address record keeping and procedures; establish yearly assessment of removal and seek to improve speed and thoroughness by closing procedural "holes." Interdivisional effort needed. Test transformers in shops and clean contaminated transformers before returning to field. |

ISSUE

combined with other oil in a bulk tank.

4. Inspection/Identification programs (also see 3 and 5)

- a. What equipment, what storage tanks, what debris, what soil should be either checked for PCB contamination, assumed to be contaminated or assumed to be free of PCB? Do appropriate people have information?

Would changes in inspection programs help us deal with spills or failures creating potential contamination or exposure.

- b. Contamination over 500 ppm has been found in several building transformers, and suggests that other network transformers may be similarly contaminated. Are transformers in street vaults of similar age and type? Fire/toxic smoke concerns the same because building ventilation intakes can be nearby; many

STATUS

EPA TSCA regs. require certain inspections for equipment with fluid known to be over 500 ppm. This is ongoing once such equipment has been found. New proposed regs. address network transformers in relation to fire and toxic smoke threat.

See 7 and 10.

Network underground has recently accelerated testing some of its 750 transformers and has initiated a labeling system (500 ppm or over; 50-500 ppm; under 50 ppm), and weekly reporting system. Clor-N-Oil kits are used with GC follow-up on positives.

RECOMMENDATIONS

Assess costs vs. benefits of additional identification initiatives. Consider accelerating inspection/testing. Monitor fire rules development. Discuss with SFD.

Assure that maintenance and spills in vaults with contaminated transformers are handled properly in terms of safety and environmental exposure.

Assess current identification schedule for network. Consider testing all 750 network transformers on accelerated schedule of a few months rather than two or three years. Evidence suggests to us that all network transformers--not merely those in buildings--should be checked. This would also help in maintenance and spill cleanup.

Evaluate cost effectiveness of flushing vs. replacing network transformers with

| <u>ISSUE</u> | <u>STATUS</u> | <u>RECOMMENDATIONS</u> |
|---|--|--|
| <p>people can be on streets; employee safety concerns the same.</p> | | <p>over 500 ppm in the oil. Consider flushing oil "near" 500 ppm, too (e.g., 450 or 400 ppm).</p> |
| <p>Oil from dielectric tests drawn from network transformers not yet tested for PCB may be contaminated, may contaminate test equipment, and may be disposed of improperly.</p> | | |
| <p>Street vaults raise additional issues of proper disposal of materials cleaned out of vaults by vactor truck, and whether adequate personnel protection is used by all persons entering vaults. In particular, when it is known the vactor waste will include oil from one of these transformers, should it be (1) tested before disposal of wastes, or (2) assumed to be over 500 ppm because of results on other network units?</p> | <p>EAD has had water and sediments sampled from vactor truck and two selected vaults in response to Operations' request and City Eng. inquiry about disposal in municipal landfills. Results show toxics such as metals and PAHs in street dust. Some vaults are known to contain asbestos products. Now there may be reason to suspect PCBs in vaults. EAD is presenting results to Oper., Eng., Health Dept., and Metro.</p> | <p>Dispose of waste containing asbestos per City Solid Waste rules, by burying at municipal landfill. Clean oil before washing and vactoring vaults. Consider mechanical means to reduce street runoff. Consider testing oil or oily waste by Clor-N-Oil for PCB prior to cleaning and to avoid contaminating vactor truck tank.</p> |
| <p>c. Substation transformers and other equipment in substations may not be on</p> | <p>Activities such as surplus unit subs during 26-kv conversion, renovations involving equipment</p> | <p>Consider substation inspection and labeling plan some other utilities are investigating, for transformers and</p> |

| <u>ISSUE</u> | <u>STATUS</u> | <u>RECOMMENDATIONS</u> |
|---|---|--|
| <p>any schedule for PCB identification. If there is a program, we would like coordination with soil testing we must do. Also, coordination with construction or other plans that affect or are affected by our soil testing. During soil testing, or during SEPA environmental review by EAD, PCB contamination in equipment is sometimes incidentally identified.</p> | <p>removal (such as Canal) or excavation at subs, or gravel replacement for electrical safety (such as South and Duwamish) illustrate the need for coordination in the planning phase of construction to prevent spreading contamination during grading or improper disposal of gravels, etc. EAD has initiated meetings to better coordinate our testing with construction or decommissioning schedules.</p> | <p>other oil equipment.</p> <p>Establish means of checking for contamination in oil and soil during planning phases of construction, renovation, removal, and surplus to ensure worker and environmental safety, and compliance with laws (including new state laws on hazard communication to SCL and contractors' employees). For example, test oil in equipment in substations in conjunction with (before) testing soil at substations; coordinate sampling according to EPA protocols.</p> |
| <p>5. Testing</p> | | |
| <p>a. What should be tested? What priority?</p> <ul style="list-style-type: none"> - Which equipment transformers (c.b.'s, p.t.'s, etc.) and when? - Which oils? in units or in bulk tanks? Which soils? <p>b. What test methods should be used, and when? In what units?</p> <ul style="list-style-type: none"> - Clor-N-Oil kits - Suitcase tester - Gas chromatograph | <p>Operations samples and administers contract for testing oil by GC in bulk tanks for equipment in service or in shops, and for individual pieces of equipment from network after positive CNO tests from salvage before disposal. Also has McGraw-Edison tester. Salvage and Network are also looking into such testers.</p> <p>For disposal purposes EPA requires GC testing; CNO okay for screening in field (EAD letter to EPA and response 10/84).</p> <p>Distribution is testing certain</p> | <p>Continue practice of not draining units at salvage until test results received. Oil should be tested before being drained in shops, too; 1/28 memo Distrib. to Oper., for example. Expand this practice? Consider costs for additional testing such as for all network transformers, for poletop transformers, or for substation equipment (see 4. above).</p> <p>Address question of extent to which our testing policy prevents or accepts dilution, and what is appropriate. Consider other applications of Clor-N-Oil such as for other field equipment and at spill or leak sites to determine</p> |

| <u>ISSUE</u> | <u>STATUS</u> | <u>RECOMMENDATIONS</u> |
|---|--|--|
| <ul style="list-style-type: none"> - In field, in shop, at salvage - Individual piece, of equipment or batches - Bulk tanks | <p>network transformers with Clor-N-Oil kits and GC follow-up for positive readings. See 4.a above regarding issue of timing and testing in street vaults as well. Problem involving test kit disposal recently cleared up by joint efforts of Distrib., Whse., and EAD.</p> | <p>appropriate cleanup and personnel protection.</p> |
| <p>c. Who will do which tests? When do sampling protocols affect the validity of our sampling?</p> <ul style="list-style-type: none"> - Oil compacted with soil - Distribution - Operation - EAD - Consultants | <p>EAD samples and administers contract for sampling and testing of soils and waters in accordance with EPA sampling protocols.</p> | |
| <p>d. Is our testing cost effective? Should SCL or the city equip its own lab, given factors such as (1) volume of testing we do and (2) length of turn-around for results?</p> | <p>PCB committee chaired by Eng. is looking at some aspects of sampling and testing costs including use of contract lab vs. setting up SCL lab with GC, greater use of CNO kits.</p> | |
| <p>e. What training is appropriate such as for using Clor-N-Oil kits? Who will conduct training? What material control is appropriate such as restricting who can obtain from</p> | <p>Training apparently by Operations. Safety and EAD not involved. Safety and disposal concern remains. Manufacturer offers a videotape we might use and has sent MSDS at our request.</p> | <p>Establish training before anyone uses kits. Note that manufacturer has changed instructions three times in less than a year. Note that kit contains toxic substances as manufactured, and people using kit report drips and spraying of oil under pressure during</p> |

ISSUE

warehouse, logging kits in and out to record proper disposal of each kit used? Should we continue a quality assurance check to evaluate accuracy of results SCL personnel get from these kits?

STATUS

RECOMMENDATIONS

proper kit use. Preview video for usefulness. Have Warehouse distribute MSDS with each kit (per Safety memo).

For record keeping efficiency, environmental and personnel protection, and materials control, restrictions should be placed on obtaining Clor-N-Oil kits now stocked in warehouse. Disposal problems arose when only one crew had kits, and were only recently cleared up. Questions were also raised about improving reliability of results by controlling the conditions where tests are performed (in a dry and heated environment with a working table, etc.) and limiting the number of people who perform the tests. (This does not necessarily mean limiting the number of people who draw samples, however.)

6. Record keeping.

No one division oversees record keeping related to various aspects of PCB handling. Records include or should include:

- inventories, inspection and maintenance reports
- testing and results
- purchasing such as of CNO kits
- salvage returns, disposal

Distr., Oper., Eng., Mat. Mgt., Finance, and EAD all have certain records. EAD is now giving soil test results to Civil Engineering to transfer on to blueprints.

Preparation of annual report to EPA will be by SSC Warehouse supervisor with copies to various others beginning this year.

Consider computerization, establishing thorough tracking with easy access for affected divisions. Review format of understandability. Establish baseline inventory and update continuously. Maintain cost data to utilize in assessing overall PCB management at SCL. A central file for soil test results is also needed.

Address the issue of how to make test

| <u>ISSUE</u> | <u>STATUS</u> | <u>RECOMMENDATIONS</u> |
|---|---|---|
| <p>records and costs</p> <ul style="list-style-type: none"> - repair returns - retrofill activities - annual reports for EPA - oil from all potential transfers of contamination including shops, holding tanks. | <p>Information needed for analysis of our costs, our compliance, and our options is spread around and time-consuming to compile, so may not get used.</p> | <p>information available to employees at the site tested (both good and bad results. Determine means to identify sites in the field where PCB testing on oil suggests ground contamination should be checked.</p> |
| <p>Not only for our own efficiency in management, but also in the event of enforcement actions and subpoenas, lifetime tracking and coordinated record keeping which is uniform and complete would help. EPA inspection last March (violation letter received January 31, 1985) and scrap metal dealer TSCA actions at Williams, Strandley, etc., are illustrative.</p> | | |
| <p>7. Procedures.</p> | | |
| <p>Existing procedures may need to be updated.</p> | <p>EOP Tab E PCB Spill Response</p> | <p>Develop or adapt comprehensive <u>manual</u> for employees exposed to potential exposure for safety and environmental compliance. Supply copies.</p> |
| <p>On a number of occasions, employees who may be exposed to PCBs have asked EAD for additional procedures and training (warehouse, salvage,</p> | <p>EOP Tab D Oil Spill Response DPP 504 P 604 Handling of PCBs</p> | <p>Initiate immediate training by consulting affected employees about the needs they perceive. This is an emotional issue and</p> |

ISSUE

network, and station crews, for example).

Topics which need to be covered include communication among divisions, and:

- What is appropriate protective clothing for various job settings?
- How are contaminated tools, clothing, soils handled, cleaned?
- How is ruptured or leaking equipment contained and delivered to shops or warehouse?
- What PCB protections is appropriate for spills from capacitors in racks?
- How much soil should be removed during spill cleanup?
- How should spills in vaults be cleaned up?

Procedures should be clear about who is affected, what situations are covered, and where to ask questions as they arise.

STATUS

Procedures are not applied consistently, as different divisions may have their own for similar work or for parts of the same job (for example, a ruptured capacitor could involve Distr., Oper. (gardeners), NSC warehouse, and SSC salvage). These should be reviewed for applicability and integrated as appropriate. All affected employees are not familiar with existing procedures, the reasons for them, or memos augmenting them. Notification has not always occurred.

RECOMMENDATIONS

further delay is ill advised.

Review EOPs and DPPs for updating as appropriate, and to identify gaps to be filled, and to assure consistency among divisions.

Formal EOPs or DPPs may not be the best format for expeditious communications. Perhaps less formal "guidelines," or a manual as suggested above would be better. Determine appropriate format or formats for quick preparation and wide distribution and use.

| <u>ISSUE</u> | <u>STATUS</u> | <u>RECOMMENDATIONS</u> |
|---|--|--|
| 8. Protective clothing or gear requirements. | | |
| <p>Questions have arisen over when to use protective gear and what protection is appropriate in each situation. Some problems relate to the fact that use of protective gear may be discretionary rather than mandatory, or incompletely described, leading to inconsistency. There has also been difficulty in obtaining suitable gear; for example, shoe coverings large enough to fit over work boots and sturdy enough for walking on gravel or concrete. Sometimes spreading contamination off site on shoes or clothes is an environmental problem more than a safety one, too.</p> | <p>Some divisions have developed at least partial guidelines or requirements, but consistency throughout the utility is needed. Safety and training concerns have repeatedly been mentioned to us at Safety meetings, in phone calls, from employees, and when we work in the field with people from other divisions. This is also a Right-to-Know concern, and information on hazards and protection and training will be required by that program. Safety, Distribution, Engineering Standards, and EAD have been pursuing the matter of adequate safety gear, especially shoe coverings. Stock is available, but products are not sufficient to meet our needs.</p> | <p>As with 7 above, develop comprehensive guidelines or manual for all employees. Utilize outside experts if needed. Cooperative efforts among Safety Unit, EAD, and affected crews.</p> |
| <p>Personnel concerns about toxicology and health effects have not been fully addressed. Present staff in Safety and EAD are not toxicologists. Further expertise is needed.</p> | <p>Dave Eaton, a toxicologist from the University of Washington School of Environmental Health, has come to a few Safety meetings. Many more employees have expressed their desire to meet with someone like him.</p> | <p>EAD proposes hiring a toxicologist to meet with employees to discuss this issue and answer questions. This seems to have worked well in a few sections already, but more time should be allowed. Perhaps SCL should also hire an industrial hygienist on regular staff.</p> |

| <u>ISSUE</u> | <u>STATUS</u> | <u>RECOMMENDATIONS</u> |
|--|---|--|
| <p>9. Training.</p> <p>See 7 and 8 above. Note overlap with Worker Right-to-Know program too.</p> <p>In-house training is not coordinated overall to cover environmental or safety questions. Are all crews getting consistent information? Are they getting information in depth enough for their needs? Calls and questions we receive indicate they are not.</p> <p>It has been difficult to get appropriate personnel to outside training workshops or conferences. If anyone goes, it is usually the same for one or two people, usually a supervisor rather than the staff performing the work.</p> <p>We are unable to respond expeditiously to new calls for training.</p> | <p>Training now very decentralized, responsibility of each spur. Some procedures exist, but are not necessarily widely known. No mechanism seems to exist for quickly filling gaps, once a need is identified, nor for searching out where the needs are. Right-to-Know program coming into place may highlight the existing problems. At any rate, it will impose an obligation on the utility to train workers about PCB hazards, handling, precautions, and disposal, in staff, accordance with the state Hazard communication Rule.</p> | <p>Establish immediate training, involving affected employees in the planning and delivery. Get outside experts as needed. Consider making a PCB training video (or finding one from one of the many companies in the business). Involve Safety and EAD.</p> <p>Again, from calls and questions we get, it appears that staff do not always know existing procedures. These should be more widely disseminated. On topics like oil spill cleanup, some nonfield such as in engineering, need training on the procedures and may also need training on the procedures and laws if they are to be able to help prevent spills and design containment.</p> <p>In-house training, outside training, or both, need to be beefed up.</p> |

| <u>ISSUE</u> | <u>STATUS</u> | <u>RECOMMENDATIONS</u> |
|--|--|---|
| 10. Spill Prevention | | |
| <p>Water pollution laws require containment facilities and spill clean-up plans for our facilities storing over 600 gallons of oil. Where PCB is known or where regulations require us to assume it is present, we must also address PCB spill prevention and cleanup in our plans. Plans must be updated periodically.</p> | <p>We have been cited by the EPA for not having our SPCC plans prepared or updated at LUSP and SSC, both generally and for our PCB storage area. We have had oil spills, and violations of the laws. Last year METRO required us to change our oil transfer practices at SSC after a spill there. Work on SPCCS has not received appropriate priority.</p> | <p>Assign appropriate priority to preparation and updating of SPCC plans by professional engineer, as required by Federal Water Pollution Control Act and PCB regulations.</p> |
| <p>Field personnel, supervisory personnel, engineering personnel involved in work relating to oil facilities or equipment design, maintenance, construction, spill clean up, etc., all need to be aware of legal requirements that affect them and procedures to follow. Personnel at generating facilities also expressed their need for such training. Training and manuals are available from outside firms if necessary.</p> | <p>Other spills, small or large, have pointed out that our plans and even our EOPs are not adequate to assure proper notification and cleanup, or that affected personnel are not familiar with the procedures they are supposed to follow.</p> | <p>Provide information and training regularly. Obtain outside trainer if necessary. Prepare manual handy to all. Assess EOPs on oil and PCB spill response for adequacy. Post in substations and other facilities the basic steps in the EOP, for example:</p> <ol style="list-style-type: none"> 1. Identify spill source. 2. Stop flow. 3. Contain spilled material to prevent spreading. 4. Notify. 5. Clean up. <p>Naturally, clean-up materials (absorbents, etc.,) and disposal containers need to be readily accessible. Decisions also need to be made about when to treat a spill as PCB-contaminated or whether to test.</p> |

ISSUE

STATUS

RECOMMENDATIONS

Leaks in equipment, such as ruptured capacitors or blown transformers, have raised containment and cleanup concerns involving Distribution, Operations (Gardeners clean ground), Warehouse, etc. (EAD and Law can advise). Questions which have been raised include: How is leak contained during removal from a pole? Should spill areas on the ground be posted or roped off until gardeners arrive? How much ground gets cleaned? How well does visquene hold oil?

EAD staff continues to work with Distribution staff preparing procedures to answer some of these needs. EAD also worked with Warehouse recently on procedures they wrote on transporting leakers to NSC and SSC warehouses. All affected should be involved. Since a single incident requires action by several divisions, consistency in their procedures and coordination of their responsibilities are appropriate.

11. Storage and containment.

See 10 and earlier items. TSCA regulations stipulate storage terms and facilities specifications: generally, roofed, curbed, no drains for storing PCB items over 30 days or for storing PCB over 500 ppm for any period.

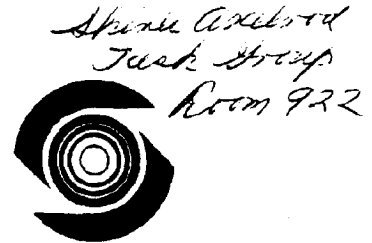
Our facility at SSC is extremely small, has a storm drain which empties directly to the Duwamish, and provides no roofed or curbed area for draining oil-filled equipment. At other locations, from SSC to subs, we have no designated PCB item storage area except a few PCB waste barrels recently located at NSC as a result of Safety and EAD efforts with Warehouse and Distribution. Containment has not routinely been addressed yet, either. Recent EPA violations and DOE letter highlight the need to address these concerns everywhere where we store mineral oil (unless it has been tested and found clean)--not just in Salvage.

New CIP request has been submitted to address this. EAD, Salvage, and Civil Engineering discussions should continue. Assess compliance with laws. Assess facilities' needs and undertake appropriate corrective actions. Involve all affected divisions.

| <u>ISSUE</u> | <u>STATUS</u> | <u>RECOMMENDATIONS</u> |
|---|--|--|
| <p>12. Equipment other than transformers and capacitors may contain PCB. PCB was used in switches, regulators, heat transfer and hydraulic equipment, among other things, as well as in transformers and capacitors. In the course of maintaining, moving, or disposing of machinery, do we have any idea where else we may have PCB?</p> | <p>Streetlight ballasts and indoor fluorescent light ballasts have already given us (and others) rude shocks. Other equipment has not been surveyed, to our knowledge.</p> <p>Other industries, including utilities, have discovered PCB fluid where it was not suspected or checked, and recommended proactive rather than reactive management.</p> | <p>Consider surveying equipment such as in powerhouses and shops to establish whether potential handling or disposal issues exist. Institute safety and disposal protections if needed. Talk to other utilities, industries about where PCB has turned up.</p> |

Your
Seattle
City Light

Memorandum



FILE

981.3

8980.6 attached to
~~with~~ 2/27/85 memo
from Mac to Ricardo

Date : February 27, 1985

To : M. J. Macdonald

From : C. T. Rockey *Original Signed by*
C. T. ROCKEY

Subject: PCB Testing, Storage and Warehouse Spill Prevention

The Task Group assembled in September 1984 to address Legal Department concerns on the above subject (see August 28, 1984 memorandum from R. Cruz to M. J. Macdonald) has completed its effort with the following recommendations and comments:

PCB Testing:

Utilize PCB screening kits or instruments to categorize equipment to be disposed, with gas chromatography testing of any oil to be disposed.

Storage:

Above testing will expedite and reduce storage requirements of equipment to be disposed of while this equipment is being tested. Long- or short-term storage for equipment (already tested) is being addressed by EAD in their Disposal Options study.

Warehouse Spill Prevention Countermeasure and Control at SSC:

Civil Engineering expects to begin work on the plan in early March with a report by early May.

A response to R. Cruz is attached for your signature.

HTH:en

Attached: Memorandum from M. J. Macdonald to
Ricardo Cruz dated February 27, 1985

cc: Rockey
Youngs
Bishop
DeVries
Hayashi
Task Group
File

MAR 4 1985

City of Seattle v. The Boeing Company

DOCUMENT REMOVED FOR PRIVILEGE

Box No. 161 - 2 Sheet No. 1



A/A

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION X
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

Hugh Hayashi
H/S 2
4/SA

REPLY TO: M/S 524
ATTN OF:

NOV 6 1984

Randall W. Hardy, Superintendent
Seattle City Light
1015 Third Avenue
Seattle, Washington 98104

Prohl

Dear Mr. Hardy:

I am responding to your letter of October 17, 1984, requesting information on EPA's position on the use of PCB field screening kits such as the clor-n-oil screening kits. Although EPA has not done an "evaluation" of the kits, the following represents our position on the above-mentioned kits:

The clor-n-oil PCB screening kits can be used for preliminary screening in the field to determine if PCBs are present. However, any decision on disposal must be based on the results of the accepted laboratory technique (gas chromatography). Therefore, the clor-n-oil kit, as well as any other PCB screening kit, may not be used to determine the level of PCBs for disposal purposes. Batch testing is allowed for oil-filled units, to reduce the analytical costs of determining proper disposal.

If you have any further questions please contact Margo Partridge at 442-2634.

Sincerely,

Ernesta B. Barnes

Ernesta B. Barnes
Regional Administrator

NOV 14 1984

84 NOV 18 11:37

2

RECEIVED

R. Supt / EAD

pc Hardy

NOV 28 1984

CTY0069233

SEA315647

THEME: CLEANUP THE CITY/ENVIRONMENT

SEATTLE CITY LIGHT
SOLUTIONS TO PCB CONTAMINATION
IMPLEMENTATION PLAN

February 28, 1985

I. PCB Problems and Solutions

City Light began a program of systematic inventories of hazardous materials years ago. In that context, City Light is continuing its efforts to prevent and clean up PCB contamination of the Department's facilities, equipment, and items or materials to be surplus and/or sold as scrap material. In addition, efforts to initiate cleanup at affected sites outside of the utility where City Light has contributed to PCB contamination are now underway. The Department is looking at options for disposal of PCB contaminated oil, including a high efficiency regional incineration facility for toxic wastes such as PCB. We are also seeking acceptable locations which met EPA standards for disposing of scrap metal, surplus equipment and contaminated soil.

It should be noted that technology continues to change, and more effective and safe techniques for disposal of PCB contaminated materials may be developed. City Light will continue to maintain up-to-date knowledge on the subject and techniques of PCB disposal as well as handling of other toxic materials and problems.

Through its participation on the Environmental Coordinating Committee, City Light will keep abreast of PCB-related problems in other City departments and will provide assistance as necessary.

Planned Activities

Target Dates

- | | |
|--|---------|
| 1. Update comprehensive evaluation of PCB contamination in departmental facilities, identify scope of problems and establish departmental goals and priorities for handling PCBs. | 5/15/85 |
| 2. Revise present policy and procedure for proper handling and disposal of PCBs in order to prevent PCB contamination and related problems both within and beyond the utility. This policy will spell out roles and responsibilities and identify who should be notified of potential problem areas. | 9/15/85 |
| 3. Assess existing programs for handling PCB related problems to determine whether they are: | |

- consistent with the Department's goals, priorities and established policies and procedures; 8/15/85
 - measure the effectiveness of the program; 8/15/85
 - review schedules; and 8/15/85
 - effect modifications to schedules and/or programs as necessary. Ongoing
4. Begin developing new programs on an ongoing basis which will further departmental efforts to reduce and/or eliminate PCB contamination and related problems affecting the Department. 8/15/85
 5. As part of the Worker Right-To-Know program, the Department will keep employees informed of associated concerns and proper handling of PCB contaminated equipment and property. Ongoing
 6. The Department will continue to provide employees with proper protective clothing and equipment for handling PCB contaminated items. The Safety Office will continue to seek up-to-date information on ways to protect employees who may be affected by PCBs. Ongoing
 7. Prepare and submit reports for the Superintendent informing him of the status of problems for handling PCB related problems and making recommendations for actions and changes as necessary. Quarterly (starting second quarter of 1985)

II. Current Activities and Programs

A. Lake Union Steam Plant (LUSP)

There is 19,310 bbl (811,000 gallons) of fuel oil containing an average of about 75 ppm PCB (this is above the 50 ppm PCB limit) stored at the LUSP. On April 23, 1984, EPA was notified of this situation. Prior to closure of the LUSP and in order to comply with EPA regulations, City Light intends to dispose of PCBs. Because of environmental and legal risks, there are limitations on cleanup options and time constraints for completion of cleanup efforts established by EPA to be taken into consideration. EPA may fine City Light beginning April 23, 1985, if cleanup efforts have not